

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants	Tim Sievers, <i>et al.</i>
Serial No. 10/719,585	Filing Date: November 21, 2003
Title of Application:	Method and Apparatus for the Production of a Workpiece of Exact Geometry
Confirmation No. 3272	Art Unit: 1791
Examiner	Matthew J. Daniels

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Reply Brief Under 37 CFR §41.41

Dear Sir:

Having received the Examiner's Answer, Appellant submits this Reply Brief for the above-captioned application pursuant to 37 C.F.R. §41.41 as follows.

Reply to Examiner's Responses

Appellant has fully set forth its arguments for patentability in its previously filed Appeal Brief. Herein, Applicant briefly addresses the Examiner's Responses to Applicant's arguments, as set forth in the Examiner's Answer.

In his Examiner's Answer, in Section 10, Page 8, the Examiner asserts that since Herfurth requires the blowing or vacuuming of powder only in a dependent claim (i.e., Claim 19), but does not recite this limitation in independent Claim 1, this limitation must be optional and that Herfurth, thus, must somehow teach or suggest embodiments of the invention that do not use a blower or vacuum to remove the powder. Appellant completely disagrees with this assertion.

It is correct that the feature of blowing or vacuuming of powder is only recited in a dependent claim (claim 19). In the description, however, only embodiments comprising means for blowing and vacuuming of powder are provided. Also, in the cited part of the Herfurth translation (page 12, line 5) it is stated that: "The excess powder and other residue particles can be vacuumed off, for example, during the laser coating process and/or after the laser coating process and/or during the metal cutting processing step." Thus, the "optional" implication of the word "can" relates to the *time* when the process is carried out and not to *whether* the process is carried out at all.

In particular, it has to be pointed out, however, that throughout the document, for example also in claim 1 it is set forth that metal-containing powder "is supplied into the melt region [of the laser] coaxial to the laser beam." In the part of the description (e.g. Herfurth Translation, page 9, penultimate paragraph) referring to Figure 2, it is further set forth that:

The powder is guided coaxially to the laser beam 17 into its melt region through outlet openings of the powder ducts 20 [of the powder head 5] located concentric to the laser beam 17 and is melted in the melt region. In addition, the powder head 5 has inert gas ducts ... in order to supply inert gas for the melting process and to bundle the powder beam.

Therefore, it is evident that at no time will the working piece be surrounded by powdered starting material. From Figure 1, it can also be seen that the excess powder (which is not sintered) from the powder head will not accumulate around the working piece, but will be dispersed over the cooling plate 24 driven by the momentum provided by the powder head.

Thus, when a person skilled in the art combines Benda and Herfurth, he/she will arrive at a laser sintering process according to Benda further including a mechanical finishing of the basically clean working piece as, according to Herfurth, the excess

powder disperses over the cooling plate or is even removed by blowing or vacuuming off so that the working piece is clear or substantially clear of excess powder.

Hence, even a combination of the teachings of Benda and Herfurth does neither suggest nor render the feature obvious that each layer is mechanically finished while the layer is still surrounded by powdered starting material.

For the foregoing reasons, as well as those set forth in Applicant's previously filed Appeal Brief, Applicant respectfully submits that the claimed invention embodied in each of Claims 1-5, 7 and 8 is patentable over the cited prior art. As such, Applicant respectfully requests that the rejections of each of Claims 1-5, 7 and 8 be reversed.

Respectfully submitted,



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